

## **REPORT ON THE GC-MS WORKSHOP**

The workshop was facilitated by Dr. Steve Lancaster, an analytical scientist and a senior technologist within the petrochemical industry (BP) and Professor Antony Gachanjah, an associate professor in analytical/environmental chemistry at JKUAT. There were about 25 participants drawn from 7 sub-Saharan African countries in attendance. Out of these, 11 were sponsored by PACN Kenya and 3 by OPCW.

List of participants sponsored by PACN Kenya:

1. Mr. Vincent Madadi – University of Nairobi, Kenya
2. Ms. Deborah Abong’o – University of Nairobi, Kenya
3. Ms. Joyce Njagi – University of Nairobi, Kenya
4. Dr. John Wanjohi – University of Nairobi, Kenya
5. Dr. Ruth Wanjau – Kenyatta University, Kenya
6. Mr. Kenneth Arinaitwe – Makerere University, Uganda
7. Mr. Ivan Gumula – Kyambogo University, Uganda
8. Mr. Joel Mihale Mitabola – The Open University of Tanzania, Tanzania
9. Mr. Engdawork Admasu – Addis Ababa University, Ethiopia
10. Mr. Minaleshewa Gabretsadik – Addis Ababa University, Ethiopia
11. Mr. Tegene Desalegn – Addis Ababa University, Ethiopia

List of participants sponsored by OPCW:

1. Dr. Samuel Osafo Acquah - Kwame Nkrumah University of Science and Technology, Ghana
2. Dr. Veronica Obuseng - University of Botswana, Botswana
3. Ms Margaret Mashingaidze - University of Zimbabwe.

The workshop was opened on the 2<sup>nd</sup> March, 2009 at the Jomo Kenyatta University of Agriculture and Technology (JKUAT) with the Vice Chancellor Professor Mabel Imbuga, the Deputy Vice Chancellors, the Dean, Faculty of Science and lecturers from the Department of Chemistry gracing the occasion.

The Vice Chancellor in her opening remarks noted that JKUAT had made great strides in the use of GC-MS equipment, notably in the analysis of pharmaceutical products, pesticide residues in water from coffee growing areas and examination of pyrethrum extracts among others. She called on scientists to employ modern technology to check the proliferation of counterfeit pharmaceutical products in Kenya which accounts for 30% of all drugs in the Kenyan market.

The following topics were well covered during the workshop:

- Introduction to the GC and MS
- Interpretation of spectra
- Maintenance of the GC-MS
- Tuning and calibration of GC-MS
- Running of the GC-MS

Sample pre-treatment using solid phase extraction method and identification of unknowns in an analgesic drug sample were also covered. However, more time was needed for liquid/liquid extraction, derivatization, and quantitation and also to give the participants enough time for hands-on on the machine. This led to a general feeling that the workshop

should have lasted longer than 1 week in order to produce a competent team that can go out and train others who have the machine but lack skilled personnel.

The general response from the participants was that the workshop was timely and that the resource persons were exceptionally knowledgeable on the subject. They were very well prepared and they delivered the information in a way that is quite simple to understand. They also gave enough opportunity for interaction with the participants.

After a week of intensive training, the workshop was finally closed down on the 6<sup>th</sup> March, 2009 by the Dean of the Faculty of Science, Professor David Mulati who in his closing remarks thanked PACN Kenya for organizing the workshop in their institution and OPCW for sponsoring some of the participants. He said that this international workshop has put the Department of Chemistry and the entire institution in the limelight and that they are ready to host another instrumentation workshop which OPCW has offered to sponsor. The participants were also grateful to both PACN Kenya and OPCW for sponsoring them to the workshop. One of the participants thus remarked on behalf of the rest, "There is need for collaboration of scientists in Africa and this workshop has opened an opportunity for us to form USA – United Scientists of Africa"